RV Atalante EUREC4A-OA

Daily cruise report (01 February 2020)

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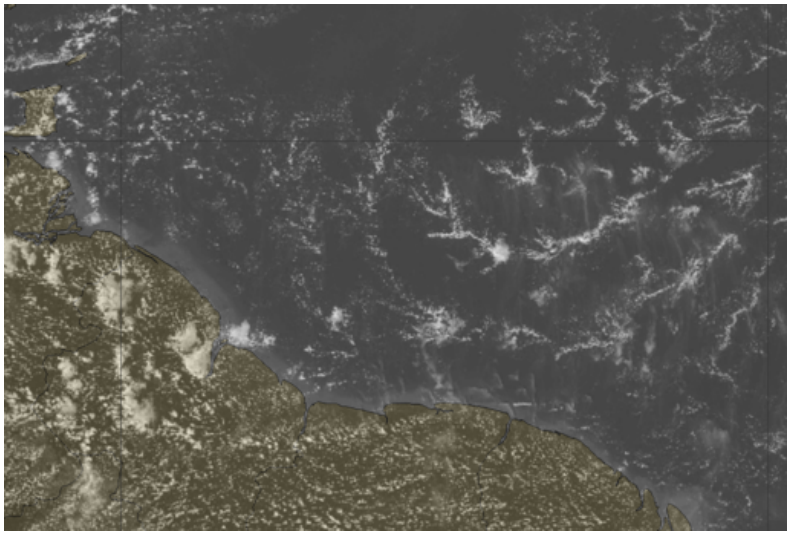
1. Objective

Today, we have completed the long promenade with the Maria S Merian and its beautiful (and impressing) CloudKite. The teams (both, the crew and scientists) have worked in synchrony and syntonism with all the stops and go dictated by the science. Everything went very well and, for sure, the exceptionally dynamical region we were sampling together will reveal its small scale secrets after such a duet. We left the Maria S Merian to undertake a bottom CTD cast, a microstructure profile and deploy two Deep-Oxygen Argo floats in the core of the "groundhog eddy" Ring3 to follow its curse during the coming months.
We now have veered southwest to our second rendezvous with the Maria S Merian, near the coast of Suriname, where we will intensively sampling together an intense filament and associated temperature front.

2. Synoptic Situation

Quite strong trade winds. Sand dust.
Easterly wind 15-20kt. The waves are about 5-6 feet.
Mesoscale cloud patterns (18utc): fish (?).

Cloud observations : 02/01/20



Time (local)	Coverage	Types	remarks
0800	3/8 High	Ci	
	0/8 Mid	-	
	3/8 Low	Cu	Sand dust
1200	7/8 High	Ci	
	0/8 Mid	-	
	1/8 Low	Cu	Sand dust
1600	7/8 High	Ci	
	0/8 Mid	-	
	1/8 Low	Cu	Sand dust

Inter-calibration: The common transect with the Maria S. Merian gives possibility to intercalibrate instruments.

Stations:

Date	Approx Local Time	Operation	Lat	Lon	NM	Operations
01/02	From 6:00 to approx. 11:30	Completeing transect to waypoint WP2: 7°45'N 52°20'W speed 5 kts, MVP, stops every 1.5 hrs VMP	7°45'N	52°20'		MVP + VMP
Maria S. Merian leave to go southwest; Atalante go to the Groundhog (or pizza?) Ring 3 center						
01/02	From approx. 12:00	From WP1 7°45'N 52°20'W go northwest to waypoint WP2: 8°20.76'N 52°41.46'W speed 9 kts, uCTD at 6 kts	8°20.76'N	52°41.46'W	41	uCTD every 30'
01/02	18:30	I deep (till the bottom) CTD cast	8°20.76'N	52°41.46'W		1 CTD bottom
01/02	21:30	1 VMP	8°20.76'N	52°41.46'W		
		Leaving WP2 Deployment of 2 (DO) Argo floats	8°20.76'N	52°41.46'W		
01/02	From approx. 22:00 01/02 to 04:30 02/02	From WP2 8°20.76'N 52°41.46'W go southwest to waypoint WP3: 7°20'N 53°8'W speed 10 kts, uCTD at 6 kts	7°20'N	53°8'W	66	uCTD every 30' no V MP
02/02	02:00	Deployment of Drifter NOAA @7°45'N	7°45'N			
02/02	From approx. 04:30 to 12:30 02/02	From WP3: 7°20'N 53°8'W go southwest to waypoint WP4: 6°12' 53°48'W MVP : speed 5 kts until 7°15'N then 10 kts,	6°12'N	53°48'W	66	MVP, 5 kts until 7°15'N then 10 kts
02/02	05:30	Deployment of Drifter NOAA @7°45'N	7°15'N			
02/02	09:00	Deployment of Drifter NOAA @7°45'N	6°45'N			
Reconvene with the Maria S. Merian. Start of the intense "zigzag"survey of the cold and fresh filament						

Autonomous systems deployed: 2 Deep Oxygen Argo floats

Overflights: No overflights. We are too far south.

4. Instrument Status

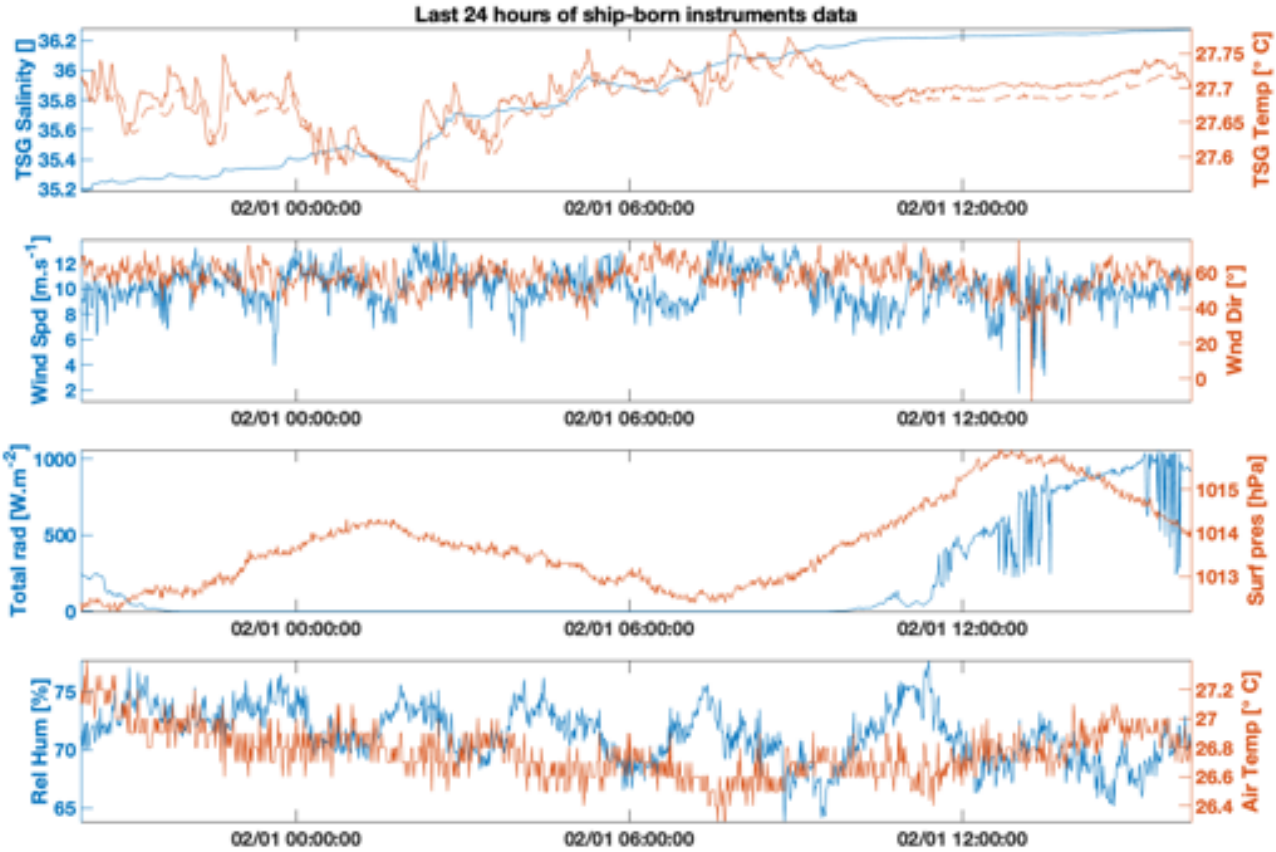
All instruments seem to work well. Today Vaisala radiosounding reception was more stable.

5. Outlook

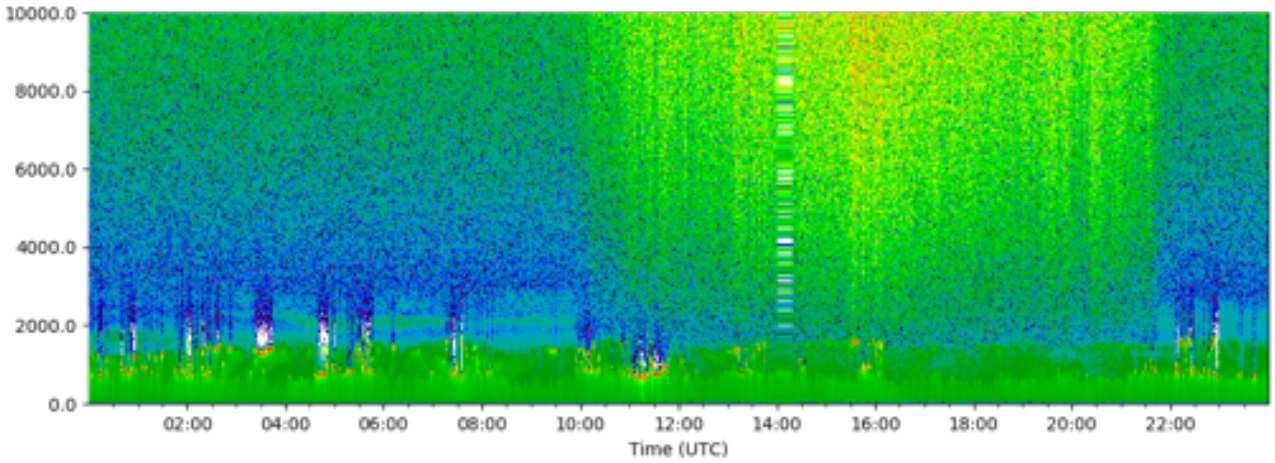
We will meet again with Maria S. Merian to sail in parallel across a filament of cold (and possibly fresh) water near the Suriname coast.

6. Figures

The Atalante far down, sized by the Kite while flying in the clouds



Underway R/V Atalante observations



Celiometer R/V Atalante 01 February 2020